

2. (Amended) A method of producing a zirconia based ceramic, comprising steps of:

refining starting materials including ZrO_2 and Y_2O_3 to contain 0.1 wt% or less each of SiO_2 , TiO_2 , CaO , Na_2O and Fe_2O_3 ;

forming a mixture of the starting materials to a desired shape; and,

firing the shaped material at a temperature in a range of 1300-1600°C to obtain a sintered zirconia based ceramics which contains 0.05-1.0 wt% of Al_2O_3 .

3. (Amended) An optical connector member formed of a zirconia based ceramics, containing ZrO_2 as a main component, 2-4 mol% of Y_2O_3 , 0.05-1.0 wt% of Al_2O_3 , and 0.1 wt% or less each of SiO_2 , TiO_2 , CaO , Na_2O and Fe_2O_3 .

10. (Amended) An optical connector member according to Claim 4 or 5, wherein the ceramic material comprises a zirconia based ceramics which contains ZrO_2 as a main component, 2-4 mol% of Y_2O_3 , 0.05-1.0 wt% of Al_2O_3 , and 0.1 wt% or less each of SiO_2 , TiO_2 , CaO , Na_2O and Fe_2O_3 .